UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte DONALD STYLINSKI,
MICHAEL SHARP, and DAVID J. WHITE

_____

Appeal 2007-3401
Application 09/950,097
Technology Center 3700

_____

Decided: January 25, 2008

_____

Before HUBERT C. LORIN, ANTON W. FETTING, and
JOSEPH A. FISCHETTI, *Administrative Patent Judges.*

LORIN, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Stylinski, et al. (Appellants) seek our review under 35 U.S.C. § 134 of
the final rejection of claims 1, 4, 6, 7, 9-11, 13-16, and 18-22. Claims 2, 3,
5, 8, 12, and 17 have been cancelled. We have jurisdiction under 35 U.S.C.
§ 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM.[1]

THE INVENTION

The Appellants' claimed invention is to a system for operating simulator programs over a network. Specification 1:13-14. Specifically, the invention relates to a system for practicing flight simulation over a public digital network, such as the Internet. Specification 1:16-17.

Claim 1, reproduced below, is representative of the subject matter on appeal.

> 1. A content-providing system for allowing a remotely-located user operating a general-purpose network browser program having a user interface displayed by a client computer to interact with a flight simulator program via a public digital network, said system comprising:
>
> a gateway having an interface to said public digital network;
>
> a database in communication with said gateway; and
>
> at least one general-purpose host computer system executing a server portion of said flight simulator program on a simulation card,
>
> wherein the server portion comprises executable

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[1] Our decision will make reference to the Appellants' Appeal Brief ("Br.," filed Aug. 24, 2006) and the Examiner's Answer ("Answer," mailed Oct. 20, 2006).

code that is based upon executable code used in an
actual aircraft component;

wherein said gateway is operable to receive
a request via the public digital network for a
connection to said server portion from the general-
purpose network browser executing on the client
computer, to authenticate the request based upon
information contained in the database, and to
establish a connection over the public digital
network between said server portion and a client
portion of said flight simulator program executing
on the client computer following a successful
authentication, wherein primary processing for
said flight simulator takes place at said server
portion, and wherein updates to the user interface
displayed on the client computer are processed at
said client portion.

THE REJECTIONS

The Examiner relies upon the following as evidence of
unpatentability:

Huffman	US 6,053,736 B1	Apr. 25, 2000
Lin	US 6,478,581 B1	Nov. 12, 2002
Darago	US 6,170,014 B1	Jan. 2, 2001

Salisbury, Chad F., et al., *Web-Based Simulation Visualization Using Java3D*,
Proceedings of the 1999 Winter Simulation Conference, pp. 1425-1429.

The following rejection is before us for review:

Claims 1, 4, 6, 7, 9-11, 13-16, and 18-22 are rejected under 35 U.S.C.
§ 103(a) as unpatentable over Huffman, Lin, Darago, and Salisbury.

ISSUES

The issue is whether the Appellants have shown that the Examiner erred in rejecting claims 1, 4, 6, 7, 9-11, 13-16, and 18-22 as unpatentable over Huffman, Lin, Darago, and Salisbury. The issue turns on whether the cited prior art would have led one having ordinary skill in the art to a system for practicing flight simulation over a public digital network comprising a gateway operable to perform the functions set out in the claim 1 and one general-purpose host computer system executing a server portion of the flight simulator program on a simulation card, wherein the server portion comprises executable code that is based upon executable code used in an actual aircraft component.

FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

The scope and content of the prior art

1. Huffman is directed to using computer-based interactive training systems, as type of "interactive courseware," whereby students training as weapons directors for the Air Force's Airborne

Warning and Control System (AWACS) (col. 1, ll. 13-29) interact

with various training nodes, such as flight data from a flight

simulator, radar data, and audio data from pilots of simulated

aircraft, on a console replicating an AWACS console (col. 2, ll. 5-

21). Fig. 2 shows a console (11) comprising a display and student

(11b) and host interfaces (11c). From there, a student can

communicate with the various training nodes. Among the training

nodes with which the student may communicate is an external

flight simulator. Fig. 1 shows the console (11) connected to a host

computer (16) and a DIS (16c) that is itself connect to a network

leading to an external flight simulator. Huffman discloses that a

"DIS (distributed interactive simulation) interface 16c permits each

console 11 to communicate with an external flight simulator, such

as those available from McDonnell Douglas Training Systems

Company." Col. 4, ll. 49-52. Huffman discloses an embodiment

whereby the DIS is connected to the flight simulator via a LAN

(local area network). See col. 4, ll. 52-54. Communication with the

flight simulator via the host computer 16 allows data to transfer to

the console where the simulation exercise is updated (see Fig. 4;

col. 7, ll. 54-59 and col. 8, ll. 57-64).

2. Darago is directed to courseware, including flight simulation application (col. 1, ll. 30-32), which may be "web-based" (col. 2, l. 8).

3. Darago (col. 10, ll. 39-61; see also Figs. 1 and 3) discloses an authentication technique involving a registration database requiring a user to input an ID and password prior to using the courseware over a network. This gives the service security (col. 10, l. 27).

Any differences between the claimed subject matter and the prior art

4. The claimed system combines various features separately disclosed in the prior art into one system.

The level of skill in the art

5. Neither the Examiner nor Appellants has addressed the level of ordinary skill in the pertinent art of content-providing systems. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau,* 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown'") (Quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.,* 755 F.2d 158, 163 (Fed. Cir. 1985)).

Secondary considerations

6.   There is no evidence on record of secondary considerations of non-
      obviousness for our consideration.

PRINCIPLES OF LAW

"Section 103 forbids issuance of a patent when 'the differences
between the subject matter sought to be patented and the prior art are such
that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said
subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727,
1734 (2007). The question of obviousness is resolved on the basis of
underlying factual determinations including (1) the scope and content of the
prior art, (2) any differences between the claimed subject matter and the
prior art, and (3) the level of ordinary skill in the art. *Graham v. John Deere
Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 ("While
the sequence of these questions might be reordered in any particular case,
the [*Graham*] factors continue to define the inquiry that controls.") The
Court in *Graham* further noted that evidence of secondary considerations
"might be utilized to give light to the circumstances surrounding the origin
of the subject matter sought to be patented." 383 U.S. at 17-18 .

ANALYSIS

The Appellants argue claims 1, 4, 6, 7, 9-11, 13-16, and 18-22

together (Br. 4). We select claim 1 as the representative claim for this

group, and the remaining claims 4, 6, 7, 9-11, 13-16, and 18-22 stand or fall

with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants argue that the cited prior art fails to disclose a gateway

as claimed; that is, a gateway "operable [a] to receive a request via the

public digital network for a connection to said server portion from the

general-purpose network browser executing on the client computer, [b] to

authenticate the request based upon information contained in the database,

and [c] to establish a connection over the public digital network between

said server portion and a client portion of said flight simulator program

executing on the client computer following a successful authentication,

wherein primary processing for said flight simulator takes place at said

server portion, and wherein updates to the user interface displayed on the

client computer are processed at said client portion," as recited in claim 1.

Br. 7.

The Examiner contends that Huffman shows "a gateway having an

interface 11c to a digital network (See Col. 4, lines 66-67); and at least one

general-purpose host computer system 16 executing a server portion of the

flight simulator program (Col. 9, lines 62-67); wherein the gateway is

operable to connect to the server portion from a user executing a client portion 11 of the flight simulator program over the digital network (Col. 4, lines 37-38, 49-55; Col. 5, lines 13-17), and to establish a connection between the client portion and the server portion, and such that interface updates are processed at the client portion (Col. 5, lines 8-12)." Answer 3.

We have reviewed Huffman and the passages in Huffman that the Examiner has relied upon and find the Examiner has reasonably described the scope and content of Huffman. FF 1. Huffman discloses an interface (at the console) establishing a connection over a LAN between a client portion of the flight simulator program executing on the client computer (i.e., on the console) and the server portion of the flight simulator program (i.e., the host computer and flight simulator) "wherein primary processing for said flight simulator takes place at said server portion, and wherein updates to the user interface displayed on the client computer are processed at said client portion" as claimed. It thus acts as a gateway. In that regard, we see no difference in structure between Huffman's interface and the claimed gateway.

The question is whether Huffman's interface (or gateway) is further operable to receive a request via the public digital network to connect the console to the flight simulator, to authenticate the request based upon information contained in an authorization database, and to establish a connection over the public digital network between the said server portion

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and a client portion of said flight simulator program executing on the client computer following a successful authentication. The Examiner concedes that Huffman does not show these features, relying on Darago instead.

Darago is directed to courseware, including flight simulation application (col. 1, ll. 30-32), which may be "web-based" (col. 2, l. 8) (FF 2), suggesting the courseware is provided on a client computer over the Internet via a browser. We agree with the Examiner that it would have been obvious over Darago to one of ordinary skill in the art to modify the Huffman system to change the local connection between the console and the host/flight simulator to a public one and thus arrive at an interface operable to receive a request via the public digital network to connect the console to the flight simulator. The benefits of doing so are clear: it allows the AWACS training described in Huffman to be provided anywhere there is computer connected to the Internet while keeping the flight simulator program in a centralized location. Regarding authenticating a request based upon information contained in an authorization database to establish a connection over the public digital network between the said server portion and a client portion of said flight simulator program executing on the client computer following a successful authentication, Darago (col. 10, ll. 39-61; see also Figs. 1 and 3) discloses an authentication technique involving a registration database requiring a user to input an ID and password prior to using the courseware over a network. This gives the service security (col. 10, l. 27).

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FF 3. For that reason it would have been obvious to one of ordinary skill in the art to apply such an authentication scheme to the Huffman system.

The Appellants also argue that the cited prior art fails to show a "general-purpose host computer system executing a server portion of the flight simulator program on a simulation card, wherein the server portion comprises executable code that is based upon executable code used in an actual aircraft component." The Examiner points out, which the Appellants do not dispute, that "Huffman discloses a memory card 17 comprising simulation programming wherein memory card 17 may reside on the host computer 16 for delivering simulation data to client portion 11 (Huffman, Col. 7, lines 56-61)." Answer 3. This is a fair reading of what Huffman discloses. The Examiner also observes that the claimed "simulation card" is not described in the Specification in terms that would distinguish it from Huffman's memory card. This, too, is not disputed. Accordingly, the only issue is whether it would have been obvious to provide the card with executable code that is based upon executable code used in an actual aircraft component. In that regard, we agree with the Examiner that "Huffman discloses simulation programming for simulating an actual aircraft .. the purpose [being] to closely emulate an actual system." Answer 3-4. One of ordinary skill in the art reading Huffman would understand Huffman's training of weapons directors to entail providing flight simulation as close to the real-thing as possible. It logically follows that Huffman's flight

simulation (e.g., "such as those available from McDonnell Douglas Training

Systems Company," Huffman, Col. 4, ll. 49-52) would employ executable

code "*based* upon executable code used in an actual aircraft component."

The Appellants further argue that there is no motivation to combine

the references to reach the claimed invention. Br. 9-11. We disagree. While

"rejections on obviousness grounds cannot be sustained by mere conclusory

statements; instead, there must be some articulated reasoning with some

rational underpinning to support the legal conclusion of obviousness," *In re*

Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006), the Examiner here *did* provide

reasons to support the legal conclusion of obviousness. The Appellants do

not so much challenge the logic underlying the Examiner's reasoning as

argue, as a matter of law, that where, as is alleged to be the case here, (a) the

references are unrelated to each other and (b) the references do not contain a

teaching or suggestion to combine them, a case of obviousness cannot be

made out. This is incorrect because

> [w]hen a work is available in one field of
> endeavor, design incentives and other market
> forces can prompt variations of it, either in the
> same field or a different one. If a person of
> ordinary skill can implement a predictable
> variation, §103 likely bars its patentability. For the
> same reason, if a technique has been used to
> improve one device, and a person of ordinary skill
> in the art would recognize that it would improve
> similar devices in the same way, using the

technique is obvious unless its actual application is beyond his or her skill.

KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740. And,

> "[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In may fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility."

Id. at 1741.

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 1739 , and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248." KSR, 127 S.Ct. at 1739 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966) (emphasis added)), and reaffirmed

principles based on its precedent that "[t]he combination of familiar
elements according to known methods is likely to be obvious when it does
no more than yield predictable results." *Id.* The operative question in this
"functional approach" is thus "whether the improvement is more than the
predictable use of prior art elements according to their established
functions." *Id.* In that regard, the Appellants have presented no evidence of
secondary considerations. FF 6.

CONCLUSIONS OF LAW

We conclude the Appellant has failed to show that the Examiner erred
in rejecting claims 1, 4, 6, 7, 9-11, 13-16, and 18-22 as unpatentable over the
cited prior art.

DECISION

The decision of the Examiner to reject claims 1, 4, 6, 7, 9-11, 13-16,
and 18-22 is affirmed.

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
§ 1.136(a)(1)(iv) (2007).

<u>AFFIRMED</u>

Appeal 2007-3401
Application 09/950,097

vsh

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